

REMARKS

Favorable reconsideration of this application is respectfully requested in view of the following remarks.

Claims 17-19 and 21-22 are amended and claims 14 and 20 are canceled. Accordingly, claims 17-19 and 21-22 remain pending for consideration. Independent claim 17 has been amended to include the recitations of canceled claim 20.

As set forth above, the claimed invention comprises a first yoke having a first magnet disposed at one end, a second magnet disposed at the other end, and the first yoke also includes the recited projecting portion. Still further, the first and second magnets at the opposing ends of the main body portion of the first yoke differ from each other in at least one dimension. Thus, according to the claimed invention, it is possible to adjust the density of the magnetic flux passing through the magnetic detecting element between when the magnetic body is positioned at a place near or adjacent to the position detecting sensor and when the magnetic body is positioned away from the position detecting sensor.

The primary reference upon which the Examiner relies, Weh, discloses a position detecting sensor including a first yoke that has a projecting portion and a second yoke positioned so that a space exists between the second yoke and the tip end of the projecting portion. Contrary to the claimed invention, however, the first magnet is disposed at one end of the second yoke and the second magnet is disposed at the other end of the second yoke. Thus, Weh does not disclose a yoke having a projecting portion and the first and second magnets all on the same yoke. The secondary reference upon which the Examiner relies, Gotoh, also does not

disclose this feature. Applicants thus submit that claim 17 is not anticipated by Weh nor rendered obvious by the combination of Weh and Gotoh.

Still further, Applicants respectfully contend that based upon the disclosure in Weh and Figure 1, it is not readily apparent to one skilled in the art that the magnetic fluxes from the first and second magnets passing through the magnetic detecting element would cancel each other when the magnetic body is positioned at a place near or adjacent to the position detecting sensor.

As amended above, claim 17 further recites that the first and second magnets at both ends of the main body portion differ from each other in at least one dimension. The Examiner recognizes that Weh does not disclose this feature and thus relies on the teaching of Gotoh to allegedly render the claimed invention obvious. Applicants respectfully disagree. Gotoh discloses a pair of magnetic members 32 extending from each end of the permanent magnet 31. Gotoh also discloses a permanent magnet 41 and a magnetic member 42 attached to an end thereof and bent into a parallel position therewith such that magnet 41 separates member 42 and member 32. Applicants submit that the Examiner's contention that "Gotoh et al. discloses the first and second magnets at both ends of the main body differ from each other in at least one dimension (Figure 1)," is not accurate. Gotoh does not even disclose first and second permanent magnets 31, 41 at opposing ends of a main body. Moreover, while the Examiner contends it would be obvious to modify the size of one of the magnets of Weh "in order to reduce the amount of material use and thus reduce the device cost," Applicants submit that this is not the motivating factor in having the magnets of the claimed invention differing from one another in at least one dimension. As explained in Paragraphs [0028] and [0031] of

the present specification with respect to preferred embodiments, detection margins a and b are set relative to the threshold value in each nondetecting zone and detecting zone as illustrated in Fig. 5 so that each vehicle type can be provided with a position detecting sensor having the identical magnetic detecting element 5 and control circuit, thereby leading to manufacturing cost reduction. Further, in order to design the margins a and b properly and inexpensively, the magnets at the ends of the main body portion differ from each other in at least one dimension, which in turn thereby allows the position detecting sensor to be downsized.

Applicants respectfully submit it would not be obvious to one skilled in the art to modify the magnets of Weh to adjust the density of the magnetic flux passing through the magnetic detecting element between when the magnetic body is positioned at a place near or adjacent to the position detecting sensor and when the magnetic body is positioned away from the position detecting sensor. Moreover, if the motivation for modifying Weh in view of Gotoh were merely to reduce the amount of material use and cost, as the Examiner alleges, one skilled in the art would likely be motivated to downsize both the first magnet and the second magnet -- not just one, as in the claimed invention. Accordingly, for at least these reasons, Applicants contend claim 17 is not rendered obvious by the cited prior art. The remaining claims are dependent upon claim 17 and are thus also not obvious in view of the cited prior art.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

BUCHANAN INGERSOLL AND ROONEY PC

Date: August 7, 2006

By: Kevin B. McGoff (Reg. 53,297)
Matthew L. Schneider
Registration No. 32,814

P.O. Box 1404
Alexandria, Virginia 22313-1404
(703) 836-6620